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PROTECTION AGAINST OCCUPATIONAL DISEASES[1]

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A BROOKLYN manufacturer inquired recently if the ventilation bill which was introduced in the state legislature last winter had become a law. When informed that in common with several other desirable measures it had failed to pass, but that up-to-date information on ventilation had been collected and could be mailed to him, this manufacturer said: "No, I don't care to know anything about that. I only wished to make sure that I was within the law."

In one of our leading industrial states a large manufacturing company had been for years a notorious offender in failing to protect its employes from lead poisoning. Under an occupational disease law which recently went into effect, sixty workmen who had become leaded were removed from this factory by the state medical inspector and orders were issued involving the expenditure by this firm of $160,000. The company under the law has cheerfully agreed to provide the necessary safeguards.

The continued use of poisonous phosphorus in the manufacture of matches furnishes a very clear illustration of the necessity of legislation in solving some of the problems in the field of industrial hygiene. Although about 67 % of all of the matches produced in this country are manufactured by the "Match Trust," and although manufacturing companies representing about 95 % of the total output have asked the government to aid them in discontinuing the use of this deadly poison for which there are harmless substitutes, they all declare their inability to use those substitutes without first having a uniform law absolutely prohibiting any manufacturer from using the poison, since it is perhaps 5 % cheaper. And still the added cost of manufacture would scarcely be noticeable to the consumer. If an average family of five persons uses an average of 30 matches a day, the family outlay for matches during one whole year is only about one dollar. The added cost to the average family in one year would be only about five cents. But to the match manufacturer who is producing a commodity with a very small margin of profit, the difference of five cents a family assumes proportions in business competition which compel him to hesitate. It is for this reason that every civilized country in the world, except the United States, has by national legislation absolutely prohibited the use of poisonous phosphorus in the manufacture of matches.

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[1] Read in discussion at the meeting of the Academy of Political Science, November 11, 1911.

In a Connecticut town where the manufacture of cartridges involves the use of mercury, the superintendent of the priming department had been obliged for many years to "lay off" during six or seven months of every twelve in order to recuperate from the effects of the mercury poisoning. But he was a skilled worker and these annual lapses were annoying and expensive. Three years ago the owners of this establishment were induced to consider the advantage of pure air in the work rooms. A ventilation system was installed. This skilled man and many lesser experts now work in this establishment without loss of time.

Two years ago attention was called to a storage-battery works in New York where two workmen died within ten days as a result of lead poisoning. The establishment was old and unsanitary. A physician in that community reported that he met with cases of both acute and chronic lead poisoning almost every week from this one factory and that as a rule the men had symptoms of lead poisoning within thirty days after beginning work in this plant. The average loss in wages and the expense of medical treatment amounted to about $65 for each attack. These men were unskilled and were easily replaced. The management did not remodel the factory. But the factory burned down last winter and in its place the owners erected splendid modern buildings with all sanitary precautions. The same physician now reports that since the work has been carried on in the new establishment he has had no cases of lead poisoning.

In Cleveland, Ohio, lead poisoning is on the increase. But most of the cases are now coming from the automobile factories, and particularly from one department where men are "sanding the boxes," without proper protection. In Belgium, by national law, dry sand-papering of paint is prohibited. But the Belgians are queer folks, who regard human life as more important than a highly polished surface on an automobile!

During the past two years I have made a special study of sixty deaths from lead poisoning in New York. Three-fourths of these deaths were due to the manufacture of white lead and to the use of white lead in paints. Now, in France, by national legislation, the use of white lead in paint is prohibited after an early date. Many other countries in Europe have adopted vigorous measures to safeguard the health of the workers where this occupational poison is still used. Many industrial diseases can be minimized or prevented if we insist.

Nine years ago a group of social-minded medical men in Milan, Italy, united in a demand for systematic study of diseases of occupation. Five years ago they called together from many nations the first International Congress on Industrial Diseases. In March, 1910, they saw the hopes of years culminate in the dedication of the first labor clinic. A large hospital is there fully equipped and devoted to the elimination of those diseases peculiar to industrial employments.

As an outgrowth of our First National Conference on Industrial Diseases, held in Chicago in June, 1910, a committee of experts prepared a *Memorial on Occupational Diseases*, which discloses industrial injuries of still greater magnitude than those which under the name of "accidents" have so nearly occupied our complete attention during the past few years.[1] In this admirable memorial of facts and figures we learn that in the United States there are probably not less than 13,000,000 cases of sickness each year among those engaged in industrial employments. The money loss each year (for those who find dollars more impressive than lives) is calculated by these conservative experts as nearly three-quarters of a billion dollars. At least one-fourth of this painful incapacity for work, we are told, can be prevented, if we insist.

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[1] The Ohio state accident commission announces that seventy-five per cent of industrial injuries reported to that body by trade unions should have been classified as occupational diseases.

But a nation-wide campaign for the study and prevention of occupational diseases has been developed in this country during the past two years. Thousands of people have learned that in the making of the common parlor match, in the manufacture and use of ordinary lead paint, in the foundation work for bridges, and in a long list of other occupations, there continually lurks the hideous possibility and the too frequent agony of preventable disease and death. Our representatives in Congress, our newspaper and magazine editors, our ministers, lawyers and teachers, are beginning to mouth the scientific terminology of the unfamiliar classifications of occupational diseases. Agitation has begun for the foundation of special clinics and hospitals for the study, treatment and prevention of these peculiar injuries which are due to the conditions of employment. There is now forming a belated sentiment favorable to the elimination of unnecessary suffering and death among those who toil in factory, workshop, and mine.

"Unnecessary suffering and death!" Lowered vitality and anemia from the breathing of factory air that need not be filled with injurious dusts and fumes. Weakened resistance to ward off rheumatism and pneumonia that might have been vanquished except for the unregulated moisture in the weaving-shed and dye-house. The hatters' "shakes," the potters' "rot," the painters' colic and "wrist drop," the caisson workers' "bends," the matchmakers' "phossy jaw," the brassworkers' chills, the boilermakers' deafness, the glassblowers' cataract, the miners' asthma, the blue line on the gums!

The humble stonecutter, who spends his life in carving lasting memorials for his fellow-men, on account of the dust he breathes dies fifteen years ahead of his time. When the Eads bridge was built across the Mississippi River at St. Louis, 600 men were employed in sinking the foundations. Of these 600 men 119, or nearly 20 %, suffered from caisson disease, and 14 died. No less than 27 trades are menaced by arsenic poisoning. In at least 138 trades, we are told, workmen are in constant danger of poisoning from lead. Nearly every indoor occupation has its peculiar disease danger. With reasonable care much of this danger may be removed.

No one knows exactly how serious is this creeping assault of industrial disease. In America we are merely on the threshold of investigation. Conjecture as to totals is necessarily based on European experience. But we are beginning to study the problem.

In America we have held our first national conference on industrial diseases; the second conference is now being planned. Investigation has been stimulated and is now bringing to light much valuable information. For the first time in America, through the efforts of the American Association for Labor Legislation, six states have enacted laws requiring physicians to report cases of occupational disease. This is only a beginning, and upon the advice of expert medical authority in England, where this system of notification has been in successful operation during the past thirteen years, only a few of the most clearly defined and most easily recognizable of occupational diseases are included during this first year. Already, in several states, information of great significance has been secured by state authorities under this law, and when physicians have become familiar with its purpose and its operation, its scope may be extended. The recent increase in interest in the subject of occupational diseases, particularly among medical men, is due to no small extent to the responsibility now placed upon them through this legislation. This fundamental educational work, although it still calls forth an occasional protest from the physicians themselves, is already bearing rich fruit.

One of the most significant and encouraging developments of the year in the work of safeguarding the comfort and health of our millions of factory workers, is the awakening of a wide public interest in the problem of preventing industrial diseases. Magazine writers who eighteen months ago verbally scoffed at the existence of "occupational diseases" are now publishing serious articles upon the subject. A national committee appointed in September 1911 is at work upon a standard schedule for the uniform reporting of these industrial injuries.

We need and shall soon have special clinics and hospital wards for the study, treatment and prevention of industrial diseases. Such institutions will correlate the experience of our small local groups of hygienists and encourage more medical men to direct their attention to the problems of industrial hygiene. We need an American Institute of Industrial Hygiene to direct and correlate both individual and organized research. With such an institution, the long list of poisons affecting scores of different occupations would gradually be shortened.[1] Conditions which lower vitality, lessen efficiency and invite disease, would quickly be improved to the advantage of manufacturer and wage earner. The necessary research would be carried on by scientists of unquestioned ability and singleness of purpose, and in a manner which would enlist from all the heartiest coöperation.

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[1] An extensive list of these poisons with the occupations affected and the symptoms of the diseases, as prepared by the International Association for Labor Legislation, is published in *Bulletin* No. 86 *of the United States Bureau of Labor.*